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SCIENCE ADVISORY BOARD
Executive Committee Meeting
PM Research Centers Interim Review Panel
Rm 6013 Ariel Rios (2/11) and Rm 2379 EPA East (2/12)
U.S. Environmental Protection Agency
1200 Pennsylvania Ave. NW AR6013
February 11-12, 2002

I. Attendees

MEMBERS

Mr. Daniel Greenbaum, Chair
Dr. Michael Brauer
Dr. Bert Brunekreef
Dr. Kenneth Donaldson
Dr. Carol Henry
Dr. Philip K. Hopke
Dr. Patrick L. Kinney
Dr. Paul Lioy
Dr. Maria T. Morandi
Dr. Shankar B. Prasad
Dr. Ron Wyzga

EC Staff

Dr. Donald Barnes, Designated Federal Officer

Others present at the meeting are listed on the sign-in sheets (Attachment A).

II. Agenda (Attachment B)

The meeting basically followed the agenda. The minutes are presented in a more logical way, rather than a more chronological way.

III. Introduction

A. Chair's Opening Remarks

Mr. Greenbaum welcomed everyone to the meeting. He provided a brief background of the Particulate Matter (PM) Research Centers and their announced purpose to implement the research recommendations of the National Research Council. The Science Advisory Board (SAB) was being asked to assess the concept of such Centers at the mid-point of their five year term. Specifically, what has been added (and will be added) because of the Centers program that would have not have been garnered if these research funds had been dispersed by some other means; i.e., what has been the value-added of the Centers program? This information will be used by the Agency to help determine whether to continue with another cycle of Centers in the FY04 budget. Clearly, it is impossible to answer precisely such "What if?" questions -- especially since the Centers' research results and the fruits of collaboration within and between Centers are only now beginning to emerge. However, the Agency must make some decision soon and is asking the SAB to provide its studied insights on the matter. He emphasized that this was a review of the Centers concept, not a review of the current Centers, *per se*, or the research programs currently being pursued.

B. Panelists' Extended Introductions

Dr. Barnes asked each of the Panelists to introduce himself/herself, amplifying on the public information already provided on the SAB website (Attachment C) by describing any special connections with the issue of PM Centers and/or the Agency.

1. Mr. Greenbaum, the Panel Chair, noted that his institution (Health Effects Institute (HEI) receives some funding from EPA, some of which is controlled by the same office that runs the PM Centers program. He was a member of the National Research Council committee that recommended the establishment of PM Centers.

2. Dr. Michael Brauer graduated from Harvard University where he had been a student of Dr. Koutrakis. He has collaborated with German researchers who are participants in some of the work at the Rochester Center.

3. Dr. Bert Brunekreef stated that he had been a visiting scientist at Harvard 15 years ago. He is currently a member of the advisory committee for the Harvard Center, although scheduling conflicts have prevented his attending any of their meetings to date. He is currently conducting some work with German researchers who are also connected with work at one of the Centers.

4. Dr. Kenneth Donaldson had been a graduate student at the University of Rochester, which is one of the current Centers. He has also attended EPA workshop on PM issues.

5. Dr. Carol Henry is interested in the Centers concept as a science management tool for possible adoption in some of her research programs at the American Chemistry Council. She noted that she had been a part of a lobbying effort in Congress to establish the Centers concept in the first place. She introduced Dr. Tina Bahadori who would assist her with some of her work on this matter, who had been a graduate student of Dr. Koutrakis, the Director of the Harvard Center, and who had worked for five years with Dr. Lippmann, who is the Director of the New York University Center.

6. Dr. Phil Hopke noted that he has been working on a non-Centers project with

Dr. Mark Utell, who is a member of the Rochester Center. In addition, he is doing some measurement work with the California Super Site (air monitoring site), which is doing some collaborative work with the Southern California Center.

7. Dr. Pat Kinney had no remarkable connection to the Centers or the Agency on this matter.

8. Dr. Paul Lioy missed this portion of the meeting. It should be noted that Dr. Lioy was among the more than two dozen researchers who had competed unsuccessfully for a PM Center.

9. Dr. Maria Morandi noted that she knew many of the researchers at several of the Centers. She received her doctoral degree from NYU where she had known Dr. Lippmann and others at that Center. She has done some collaborative research with one of the researchers at the Southern California Center. She has had an EPA Science To Achieve Results (STAR) grant which is unrelated to Centers work.

10. Dr. Shankar Prasad expressed his appreciation for being asked to serve and identified no relationship that required mention.

11. Dr. Ronald Wyzga is serving on the advisory committees for the Harvard, NYU, and Rochester PM Centers. He has received an honorarium of \$500 from one of the Centers. Also, his employer, the Electrical Power Research Institute (EPRI), has contracts with researchers at two of the Centers.

Dr. Barnes announced that the Panelists who serve on advisory committees to the Centers (Drs. Brunekreef, Lioy, and Wyzga) had been issued "letters of determination" that acknowledged that their membership on Centers advisory committees could raise a question in the minds of a reasonable person about their ability to render impartial advice. This matter had been examined by Dr. Barnes and raised with the individuals involved. On the basis of that information, Dr. Barnes had determined that these individuals could render impartial advice on the matter before the Panel.

III. Presentations

A. Dr. Peter Preuss, Director, National Center for Environmental Research

Dr. Preuss introduced current and former National PM Research Program Managers (John Vandenberg, Bob Devlin, and Dan Costa) and key members of his staff (Stacey Katz, and Gail Robarge, and Deran Pashayan). He proceeded to provide an overview of the PM Centers program (Attachment D).

During the presentation and the ensuing discussion period the following points were also made:

1. The STAR Fellowships do not appear in the FY03 President's budget.
2. Centers of all types constituted about 30% of STAR funding; PM Centers are about 50% of air research conducted within the STAR program.
3. The PM Centers programs were to demonstrate iterative processes that were multi-disciplinary in nature, demonstrated information-sharing and collaboration, and had effective dissemination of this results.

4. One form of the question before the Agency is: "Is the Agency and science better served by a Centers program or the funding of roughly 50 grants to individual researchers?"
5. Both the General Accounting Office ("Environmental Research," Sept. 2000, GAO/RCED-00-170) and the Office of Management and Budget (OMB) have questioned the effectiveness of the STAR program. The Agency has asked both the National Research Council (NRC) and the ORD Board of Scientific Counselors (BOSC) to help the Agency develop some metrics for addressing the "research effectiveness" question.
6. In order to appear in the FY04 budget, a decision has to be reached within the next 4-5 months on whether or not to have another round of PM Centers (re-competed via an FY03 RFA) when the current Centers expire in May, 2004.
7. In answer to a question, Dr. Preuss asserted that the PM Research Program was one of the best-managed research programs in the Agency and beyond. The team-developed RFA, the presence of an National Program Director, and extensive involvement of EPA scientists in Centers; cf., "a sixth Center", combined to make the program particularly effective.
8. It is sometimes difficult to track, in detail, what research results were generated by PM Centers vs. other funding at a particular institution; and yet the PM Centers impact was clearly positive.

B. Presentations by the PM Center Directors

Each of the five Center Directors made a presentation that complemented their original joint document and separate Center documents that have been sent to the Panel before the meeting (Attachment E)

1. Dr. Lippmann provided an overview, supplemented with information about the NYU PM Center (Attachment F).
2. Dr. Froines provided a presentation (Attachment G). on
 - a. Special Attributes of PM Centers
 - b. Creation of an Interdisciplinary Center Focused on Motor Vehicle Exhaust Pollutants in Southern California
3. Dr. Oberdorster provided a presentation on (Attachment H) on
 - a. Plausibility of Biological Mechanisms
 - b. Dosimetry
 - c. Centers as Resources
4. Dr. Koenig provided a presentation(Attachment I) on
 - a. Intercenter Collaborations
 - b. Human Exposure Research
 - c. Exposure-Response Research
5. Dr. Koutrakis provided a presentation (Attachment J) on
 - a. Synthesis of PM Centers Goals & Accomplishments
 - b. Unique PM Center Program Attributes

C. Deliberations of the Panel

Under the direction of the Chair, the Panel had an open and wide-ranging discussion of their reaction to the Charge questions, informed by the presentations that they had heard. The group began to develop the major points of their report.

At the end of the first day, Mr. Greenbaum instructed the Panelists to work in small groups to re-draft and combine their responses to the specific Charge questions.

On the second day, the Panel moved to a new location (EPA East Rm 2379A) due to the excess heat in AR 6013. There the Panelists continued to work in small groups to refine the responses to the Charge questions.

Re-forming into a committee-of-the-whole, the Panelists used a computer projector to expand a draft outline of a response to the Overall Charge Question

"Is it likely that the PM Centers program will be sufficiently successful to merit continuation in FY 2004 and beyond? In which areas, to what extent, and for what reasons is a PM Centers program beneficial? Where it is not, what improvements can be made?"

that had been prepared by the Chair. They agreed that the "major message" of the Panel's report would be found in this section of the report and that some of the more detailed aspects of the responses to the other Charge questions could be incorporated in some other manner; e.g., an appendix that captured useful thoughts from the small groups, but would not be represented as a part of the consensus of the entire Panel. Dr. Barnes indicated that there is precedent for such a formulation in SAB reports.

Major points captured in the draft include the following:

1. There is merit in continuing a PM Research Centers program beyond the first five years.
2. There are opportunities to enhance the PM Research Centers program, building on the successes evident to date.

For the record, the above information was shared with a contingent from the Agency, led by Dr. Peter Preuss, and any members of the public who were present.

D. Next Steps

The SAB Staff were instructed to combine the draft contributions from the Panelists into a template of an SAB report. The Chair and the DFO will work on synthesizing these contributions into a more polished form that will be distributed to the Panelists via email for comment/concurrence. Additional iterations will occur as needed in order to reach consensus. Each member of the Panel will record his/her concurrence in writing; email will suffice.

The Panel agreed to a "contingency conference call" on Wednesday March 27 at 11:00 AM Eastern Standard Time in case there are issues that need to be resolved. Once the Chair feels comfortable that the draft of the report represents a consensus of the Panel, he will forward it to the SAB Executive Committee for their consideration, probably via a publicly accessible conference call. The draft will also be sent to the Agency and mounted on the SAB Website at that time, requesting comment on

1. Any matters of fact
2. The clarity in addressing the Charge questions
3. The completeness in addressing the Charge questions

Respectfully submitted,

Donald G. Barnes
Designated Federal Officer

Concurred,

Daniel Greenbaum
PM Research Centers Interim
Review Panel

ATTACHMENTS

Attachment A -- Sign-in sheets

Attachment B -- Agenda

Attachment C -- Background information on the Panelists

Attachment D -- Dr. Preuss's handout that accompanied his overview

Attachment E -- Material sent to the Panelists before the meeting

1.

2.

3.

Attachment F -- Handout that accompanied Dr. Lippmann's introduction

Attachment G -- Handout that accompanied Dr. Froines's presentation

Attachment H -- Handout that accompanied Dr. Oberdorster's presentation

Attachment I -- Handout that accompanied Dr. Koenig's presentation

Attachment J -- Handout that accompanied Dr. Koutrakis's presentation